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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/575,035
Filing Date: April 07, 2006
Appellant(s): JERG, HELMUT

Andre Pallapies (Reg. No. 62.246)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 17, 2010, appealing from the Office action mailed August 10, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 22, 25-27 and 29-42.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

DE 19622882	HESSE	12-97
DE 19647567	CAPS ET AL.	5-1998
3,167,159	BOVENKERK	1-1965
4,746,177	LAMPMAN ET AL.	5-1988
JP 2002336180	IWAKURA	11-2002
5,273,061	MILOCCO	12-1993
6,539,955	TILTON ET AL.	4-2003
3,387,382	WILLIAMSON	6-1968

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 22, 25, 29-30, 37-39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567.

For claims 37-39 and 22, DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only allows heat crossing from the washing container to the

latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fiber core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire

heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer. DE'882 also does not teach the thermal conductivity value of the heat damping layer is thereby dependent on the pressure in the capsule.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity

insulation panel is decreased (DE’567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31, See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation). Moreover, note that the thermal conductivity value of the heat conductivity insulation panel is thereby dependent on the pressure of the capsule because DE’567 clearly shows that when the pressure increases, the thermal conductivity value also increases (DE’567, P.2, L.16-20, see translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE’882 to utilize a heat damping layer as mentioned in DE’567 instead of the heat damping layer of DE’882 to have a vacuum insulation and enhance insulation efficiency.

For claim 25, both DE‘882 and DE’567 do not teach an internal pressure of the heat damping layer being about 0.01mbar at room temperature and about 50mbar at a temperature of about 300 degree Celsius. Note that DE’567 teaches an internal pressure of the variable heat conductivity insulation panel being smaller than 0.01 mbar (read as about 0.01mbar, P.2, L.19, See translation).

Regarding claim 25, reciting an internal pressure of the capsule of the heat damping layer at a particular temperature, it is noted that the internal pressure at the particular temperature depends on the type and amount of metal hydride that is used, one skilled in the art would have been found obvious at the time the invention was made to choose a most suitable and amount of metal hydride to enhance the performance of

the thermal insulation and conduction of the heat damping layer, as it only involves routine experiments.

Regarding claim 42, reciting a pressure difference in the capsule between when the thermal conductivity value of the heat damping layer is increased versus when it is decreased is on an order of 5000 times, it is noted that the internal pressure at the particular temperature/thermal conductivity value depends on the type and amount of metal hydride that is used, one skilled in the art would have been found obvious at the time the invention was made to choose a most suitable and amount of metal hydride to enhance the performance of the thermal insulation and conduction of the heat damping layer, as it only involves routine experiments.

For claim 29, note that the variable heat damping layer is disposed in a side wall of the dishwasher (DE’882, Fig.1, abstract).

For claim 30, DE’882 and DE’567 does not teach the heat damping layer is disposed in a selected one of the top and the bottom of the dishwasher.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the attachment position of the variable heat damping layer of combined teaching of DE’882 and DE’567 as it is a matter of design choice, consult, In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Bovenkerk (US 3,167,159).

DE'882 and DE'567 teach a dishwasher cited above.

DE'882 and DE'567 do not teach a controlling means to control the thermal conductivity of the variable heat damping layer, such that the variable heat damping layer is continuously adjustable to arbitrary thermal conductivity value between the first and second thermal conductivity value and the variable heat damping layer having thermal conductivity value approximately in a range between 0.3W/m^{2}K and 10W/m^{2}K. Note that DE'567 teaches an electrical heating (DE'567, P.2, L.30-31, See translation) to adjust the thermal conductivity of the variable heat conductivity insulation panel (read as the heat damping).

Bovenkerk teaches an insulating structures with variable thermal conductivity comprising an electrical heater (Fig.1, #19, col.4, L.45) coupled to a control, which is a rheostat (read as controlling means which is fully capable of continuously adjustable to an arbitrary thermal conductivity value between the first and second thermal conductivity value, Fig.1, #20, col.4, L.47). Note that Bovenkerk also discloses that the thermal conductivity value depends on an internal pressure (Fig.8)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE'882 and DE'567 by adding a controlling means to the heater as mentioned in Bovenkerk to control the thermal conductivity of the variable heat damping layer. Regarding claim 27, reciting thermal conductivity value approximately in a range between 0.3W/m^{2}K and 10W/m^{2}K, it is noted that the thermal conductivity value depends on an internal pressure at particular temperature, which also depends on the type and amount of

metal hydride that is used, one skilled in the art would have been found obvious at the time the invention was made to choose a most suitable and amount of metal hydride to enhance the performance of the internal insulation and conduction of the heat damping layer, as it only involves routine experiments.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Lampman et al (US 4,746,177).

DE'882 and DE'567 teach a dishwasher cited above. Note that DE'882 teaches a dishwasher comprising a cooler surface (read as a wall of the washing container having at least a condensing surface, P.1, paragraph 2, See translation).

DE'882 and DE'567 do not teach a condensing surface made of flexible material comprising plastic film.

Lampman et al teach a dishwasher having a flexible plastic tub (col.5, L.57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE'882 by using a flexible plastic tub as mentioned in Lampman et al to facilitate assembly.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of JP 2002-336180.

DE'882 teaches a method for cleaning and drying tableware in a dishwasher comprising the steps of providing a washing container (Fig.1, #1); a heat damping layer

(Fig.1, #3, #4, #5, #6, and #7), comprising a intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), disposed at least partially surrounding the dishwashing container (Fig.1), wherein dishes in the dishwasher is heated during cleaning and/or rinsing process (P.1, paragraph 2, See translation) and the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as disposing the heat damping layer at the relatively lower thermal conductivity value when thermal energy is built up during cleaning and/or rinsing process in the washing container, and disposing the heat damping layer at the relatively higher thermal conductivity value during drying process, P.2, L.4-16, See translation). Note that DE'882 also teaches the step of providing the heat damping layer (DE'882, Fig.1, #3, #4, and #5) being in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract)

DE'882 remains silent about the step of providing a heat generating means for generating heat in the washing container.

Examiner takes official notice that the use of electric heater to generate heat in the washing container is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of DE'882 by adding an electric heater to generate heat in the washing container to perform the step of heating the dishes during cleaning and/or rinsing process as mentioned in DE'882.

DE'882 remains silent about the step of providing a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fiber core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased.

DE'567 teaches the steps of providing a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule, and the closed capsule is within a given portion of the variable heat damping layer, p.2, L.25-26, See translation), wherein the heat

conductivity insulation panel is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased; and the heat conductivity insulation panel is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule of the variable heat conductivity insulation panel drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE’567, P.2, L.18-27, See translation). Note that the thermal conductivity value of the heat conductivity insulation panel is thereby dependent on the pressure of the capsule because DE’567 clearly shows that when the pressure increases, the thermal conductivity value also increases (DE’567, P.2, L.16-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of DE’882 by providing a heat damping layer as mentioned in DE’567 instead of the heat damping layer of DE’882 to have a vacuum insulation and enhance insulation efficiency.

DE’882 and DE’567 remain silent about the step of providing a dishwasher being operable to execute at least one washing program.

JP 2002-336180 teaches a dishwasher comprising the steps of providing a control means (read as program control, Fig.1, #101, abstract) to execute program (read as washing program, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of combined teaching of DE'882 and DE'567 by providing a program control to execute at least one washing program, including the operation of the variable heat damping layer, as motivated by JP 2002-336180 to simplify dishwashing procedure.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 and JP 2002-336180 in further view of Milocco (US 5,273,061).

DE'882, DE'567 and JP 2002-336180 teach a method for cleaning and drying tableware cited above.

DE'882, DE'567 and JP 2002-336180 remain silent about water deposited during the drying process in the washing container is passed from the washing container via at least one of discharge via a sump of the dishwasher, discharge via a discharge pump, and discharge via a means other than a sump or a discharge pump of the dishwasher. Note that DE'882 teaches a step of condensing humid air contained in the rinsing space atmosphere at a cooler surface of the washing container (P.1, paragraph 2, See translation).

Milocco teaches a method for drying process in a dishwasher comprising the steps of condensing vapor inside the washtub, and the condensate is collected on the bottom of the tub and evacuated by a discharge pump (col.2, L.38-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of combined teaching of DE'882, DE'567 and JP 2002-336180 by passing the water deposited during the drying process in the washing container from the washing container via a sump and discharging via a discharge pump as motivated by Milocco to reduce the humidity inside the washing container to enhance drying and prevent flooding inside the washing container.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Tilton et al (US 6,539,955).

DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of

the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fiber core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer. DE'882 also does not teach the thermal conductivity value of the heat damping layer is thereby dependent on the pressure in the capsule.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket,

abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE'567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31, See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation). Moreover, note that the thermal conductivity value of the heat conductivity insulation panel is thereby dependent on the pressure of the capsule because DE'567 clearly shows that when the pressure increases, the thermal conductivity value also increases (DE'567, P.2, L.16-20, see translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE’882 to utilize a heat damping layer as mentioned in DE’567 instead of the heat damping layer of DE’882 to have a vacuum insulation and enhance insulation efficiency.

DE ‘882 and DE ‘567 remain silent about a sound damping layer surrounding the washing container and the heat damping layer is disposed between the sound damping layer and the walls of the washing container. Note that the dishwasher of combined teaching of DE’882 and DE’567 teach the heat damping layer being disposed in surface contact with at least part of the wall of the washing container (DE’882, Fig.3, the wall of #1, read as projecting structure).

However, Tilton et al teach a dishwasher comprising a sound damping layer (Fig.1a, #26, abstract) surrounding a washing container, wherein the sound damping layer fits snugly around projecting structures so as to eliminate gaps between the layer and the structures and therefore acoustical leaks associated with those gaps (Tilton et al, col.2, L.51-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE ‘882 and DE ‘567 by adding a sound damping layer surrounding the washing container, wherein the sound damping layer fits snugly around projecting structures (in this case, the heat damping layer) as motivated by Tilton et al so as to eliminate gaps between the layer and the structures and therefore acoustical leaks associated with those gaps (Tilton et al, col.2, L.51-54). Therefore, the heat damping layer is disposed between the sound

damping layer and the walls of the washing container in the combined teaching of DE '882, DE '567 and Tilton et al.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Williamson (US 3,387,382).

DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule

has a selected one of a pressed glass and a non-pressed glass fiber core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer. DE'882 also does not teach the thermal conductivity value of the heat damping layer is thereby dependent on the pressure in the capsule.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the

heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE’567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31, See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation). Moreover, note that the thermal conductivity value of the heat conductivity insulation panel is thereby dependent on the pressure of the capsule because DE’567 clearly shows that when the pressure increases, the thermal conductivity value also increases (DE’567, P.2, L.16-20, see translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE’882 to utilize a heat damping layer as mentioned in DE’567 instead of the heat damping layer of DE’882 to have a vacuum insulation and enhance insulation efficiency.

DE ‘882 and DE ‘567 teach the walls of the washing container forming the volume are configured as condensing surfaces (DE ‘882, paragraph 4 of P.4 of the

translation). However, DE ‘882 and DE ‘567 remain silent about the walls of the washing container made of a flexible material comprising a metal film having an aluminum component.

Williamson teaches a condensing means, which is made of a sheet of aluminum (read as condensing surface made of a flexible material comprising a metal film having an aluminum component, since aluminum sheet is flexible), for dishwasher (col.2, L.56-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE '882 and DE '567 by using a sheet of aluminum as the walls of the washing container as motivated by Williamson so that the walls do not deteriorate when moisture condenses thereon (Williamson, col.2, L.58-59), thus enhance the lifetime of the dishwasher.

(10) Response to Argument

Regarding the first ground of rejection (see the Appeal Brief at page 7, paragraph beginning “1. Whether claims 22, 25, 29, 30, and 37-39 [and 42, sic] are unpatentable under 35 §U.S.C. 103(a) …”, appellant first argues that the applied art does not teach or suggest a dishwasher wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule since, it is alleged, DE ‘567 (DE 19647567) discloses that the thermal conductivity of the heat damping layer is not dependent, or only slightly so, upon the pressure in the capsule (see the Appeal Brief at page 9, first full paragraph). The position of the Examiner is that the applied art does teach or

suggest a dishwasher wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule (see, e.g., the DE ‘567 abstract and the EPO machine translation of DE ‘567 mailed on 6/23/2008 and page 2, lines 16-20). Since the claim language does not require that the pressure dependency be any particular degree, or that it be "high", etc., it is not patentably significant if the pressure dependency is “slight”, as acknowledged by appellant, since “slight dependence” reads on “dependence.”

Appellant next argues that the applied art does not teach or suggest that the damping layer since, it is alleged, the present specification discloses the damping layer being comprised of a certain material (see the Appeal Brief at page 2, second paragraph). The Examiner maintains the position that the features upon which appellant relies (i.e., the damping layer being comprised of an evacuable material having a comparatively coarse pore structure which changes its thermal conductivity more strongly than nano-microstructured substances in the event of small vacuum pressure fluctuations) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant next argues that the applied art does not teach or suggest a dishwasher wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule since, it is alleged, DE ‘567 discloses that the thermal conductivity of the heat damping layer has little or no dependence upon the pressure in the capsule (see the Appeal Brief at paragraph bridging pages 9 and 10). The position

of the Examiner is that that the applied art does teach or suggest a dishwasher wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule (see, e.g., the DE '567 abstract and the EPO machine translation of DE '567 mailed on 6/23/2008 and page 2, lines 16-20). Since the claim language does not require that the pressure dependency be any particular degree, or that it be "big", etc., it is not patentably significant if the pressure dependency is "little", as acknowledged by appellant, since "little dependence" reads on "dependence."

Appellant next asserts that the dependent claims (presumably claims 22, 25, 29-30, 38, 39 and 42) are allowable by virtue of their dependency from allegedly allowable independent claim 37, asserts broadly that the claims "recite additional patentable material" and raises no new arguments (see the Appeal Brief at page 10, first full paragraph). Accordingly, the Examiner maintains the positions taken with respect to claim 37, and the positions taken with respect to the dependent claims, including that they do not include patentable subject matter, as discussed above in this section and in the section "Claim Rejections - 35 USC § 103".

Regarding the second ground of rejection (see the Appeal Brief at page 7, paragraph beginning "2. Whether claims 26 and 27 are unpatentable under 35 §U.S.C. 103(a) ...", appellant asserts that these claims are allowable due to their dependency from allegedly allowable independent claim 37, asserts that Bovenkerk (US 3,167,159) does not cure the alleged deficiencies, and raises no new arguments (see the Appeal Brief at page 10, second to last paragraph). Accordingly, the Examiner maintains the

positions taken with respect to claims 37, and takes the position that Bovenkerk is not relied upon, and is not needed, to cure any alleged deficiencies with respect to claim 37.

Regarding the third ground of rejection (see the Appeal Brief at page 7, paragraph beginning "3. Whether claim 31 is unpatentable under 35 §U.S.C. 103(a) ...", appellant, appellant asserts that claim 31 is allowable due to its dependency from allegedly allowable independent claim 37, asserts that Lampman (US 4,746,177) does not cure the alleged deficiencies, and raises no new arguments (see the Appeal Brief at page 11, first paragraph). Accordingly, the Examiner maintains the positions taken with respect to claims 37, and takes the position that Lampman is not relied upon, and is not needed, to cure any alleged deficiencies with respect to claim 37.

Regarding the fourth ground of rejection (see the Appeal Brief at page 7, paragraph beginning "4. Whether claims 32-35 are unpatentable under 35 §U.S.C. 103(a) ...", appellant first argues the applied art does not teach or suggest a method wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule since, it is alleged, DE '567 discloses that the thermal conductivity of the heat damping layer is not dependent, or only slightly so, upon the pressure in the capsule (see the Appeal Brief at page 11, second to last paragraph). The position of the Examiner is that that the applied art does teach or suggest a method wherein a thermal conductivity value of a heat damping layer is dependent of the pressure in a capsule (see, e.g., the DE '567 abstract and the EPO machine translation of DE '567

mailed on 6/23/2008 and page 2, lines 16-20). Since the claim language does not require that the pressure dependency be any particular degree, or that it be "high", etc., it is not patentably significant if the pressure dependency is “slight”, as acknowledged by appellant, since “slight dependence” reads on “dependence.”

Appellant next asserts that the dependent claims (presumably claims 33-35) are allowable by virtue of their dependency from allegedly allowable independent claim 32, asserts broadly that the claims "recite additional patentable material” and raises no new arguments (see the Appeal Brief at page 11, last paragraph). Accordingly, the Examiner maintains the positions taken with respect to claim 32, and the positions taken with respect to the dependent claims, including that they do not include patentable subject matter, as discussed above in this section and in the section “Claim Rejections - 35 USC § 103”.

Regarding the fifth ground of rejection (see the Appeal Brief at page 7, paragraph beginning “5. Whether claim 36 is unpatentable under 35 §U.S.C. 103(a) ...”, appellant asserts that this claim is allowable due to its dependency from allegedly allowable independent claim 32, asserts that Milocco (US 5,273,061) does not cure the alleged deficiencies, and raises no new arguments (see the Appeal Brief at page 12, paragraph beginning “The Milocco reference”). Accordingly, the Examiner maintains the positions taken with respect to claims 32, and takes the position that Milocco is not relied upon, and is not needed, to cure any alleged deficiencies with respect to claim 32.

Regarding the sixth ground of rejection (see the Appeal Brief at page 7, paragraph beginning "6. Whether claim 40 is unpatentable under 35 §U.S.C. 103(a) ...", appellant first alleges that the applied art does not teach or suggest features of claim 40 that are found in claim 37, and also the feature of a heat damping layer in heat-conducting contact with a wall of a washing container and an outer wall of the dishwasher (see the Appeal Brief at page 12, last paragraph), but does not provide a new argument. Accordingly, the Examiner maintains the positions taken with respect to claims 37 and 40 as discussed above in this section and in the section "Claim Rejections - 35 USC § 103", including the discussion regarding the feature of a heat damping layer in heat-conducting contact with a wall of a washing container and an outer wall of the dishwasher (and also discussed in the Office action mailed on August 10, 2010, at page 17, first paragraph).

Appellant next asserts that the applied art does not teach or suggest a heat damping layer disposed between a sound-damping layer and walls of the washing container (see the Appeal Brief at page 13, first paragraph). The Examiner maintains the position that the applied art discloses a dishwasher wherein a heat damping layer is disposed between a sound-damping layer and walls of the washing container. DE'882 and DE'567 disclose a dishwasher having a heat damping layer being disposed in surface contact with at least part of the wall of the washing container (DE'882, Fig.3, the wall of #1, read as projecting structure); and Tilton (US 6,539,955) discloses a dishwasher comprising a sound damping layer (Fig.1a, #26, abstract) surrounding a washing container, wherein the sound damping layer fits snugly around projecting

structures so as to eliminate gaps between the layer and the structures and therefore acoustical leaks associated with those gaps (Tilton, col.2, L.51-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE '882 and DE '567 by adding a sound damping layer surrounding the washing container, wherein the sound damping layer fits snugly around projecting structures (in this case, the heat damping layer) as motivated by so as to eliminate gaps between the layer and the structures and therefore acoustical leaks associated with those gaps (Tilton, col.2, L.51-54). Therefore, the heat damping layer is disposed between the sound damping layer and the walls of the washing container in the combined teaching of DE '882, DE '567 and Tilton.

Regarding the seventh ground of rejection (see the Appeal Brief at page 7, paragraph beginning "7. Whether claim 41 is unpatentable under 35 §U.S.C. 103(a) ...", appellant alleges that the applied art does not teach or suggest features of claim 41 but does not provide a new argument (see the Appeal Brief, paragraph bridging pages 13 and 14). Accordingly, the Examiner maintains the positions taken as discussed above in this section and in the section "Claim Rejections - 35 USC § 103", including the position that the applied art teaches or suggests the features of claim 41.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/E. G./

Examiner, Art Unit 1714

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/Michael Kornakov/

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